

Executive Summary

Sequoia Riverlands Trust has partnered with the Bren School of Environmental Science and Management at the University of California in Santa Barbara to develop this regional ecosystem restoration plan.

With a mission to develop interdisciplinary solutions to environmental problems, train environmental leaders, and work for a sustainable future, the Bren School serves as an ideal partner that brings technical expertise and valuable tools to the project. The development of this restoration plan was a portion of a master's capstone project for the 2025-2026 school year.

Sequoia Riverlands Trust (SRT) is a regional nonprofit land trust based in Tulare County, California. With a mission to conserve the lands and waters of California's heartland, SRT aims to strategically conserve and restore natural and agricultural lands to promote habitat quality and support a sustainable agricultural industry, while meeting the economic and social needs of the region. SRT was awarded a grant as part of the Sierra San Joaquin Jobs initiative to plan for ecosystem restoration on a regional (four-county) scale, with the goal that projects developed through this Initiative could contribute to statewide conservation targets while creating green jobs and supporting community resilience for the future.

ENVIRONMENTAL PROBLEM

Over the past 200 years, large-scale landscape conversion and degradation across Madera, Fresno, Tulare, and Kings counties in California has resulted in many acres of natural land lost to agricultural and urban uses. The region includes many socioeconomically disadvantaged communities where over 1 million people reside. These communities face a disproportionately high burden of environmental hazards, such as air and water pollution, floods, and high-severity wildfires. Although statewide policies establish broad conservation priorities and site-specific plans address local needs, a critical gap remains for practical, mid-scale guidance that bridges regional needs and local priorities.

20%

projected reduction in
groundwater availability by 2030
across the Central Valley (PPIC)

~4 million

more acres needed for
conservation to meet CA 30x30
targets (CNPS)

79%

of community partners are highly
concerned about the future of
water use and water sustainability

DELIVERABLES

THE RESTORATION PLAN provides guidance for environmental organizations, land managers, restoration practitioners, and others in the study region interested in practical options for implementing ecosystem restoration efforts on their land.

The map series illustrates changes, threats, and opportunities for restoration across the region. Priority areas are identified to show where implementing restoration projects could have the highest impact for ecological goals, human needs, and climate resilience.

The management guidance portion of the plan grounds restoration efforts in the region's unique ecosystem characteristics and land uses, offering practical and actionable recommendations that are effective at the individual property level while aligning with broader landscape-scale objectives.

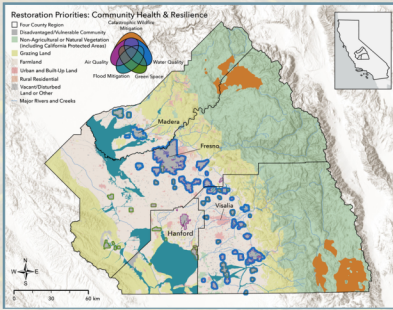
THE STORYMAP brings together analytical results and regional context into an accessible, web-based format, guiding users through each map and key findings.

Check it out here:



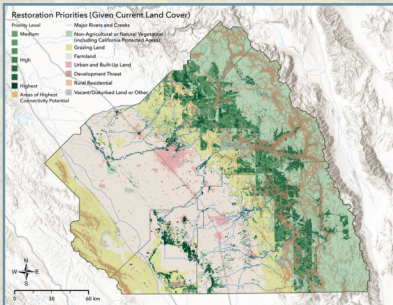
ANALYSIS & RESULTS

COMMUNITY



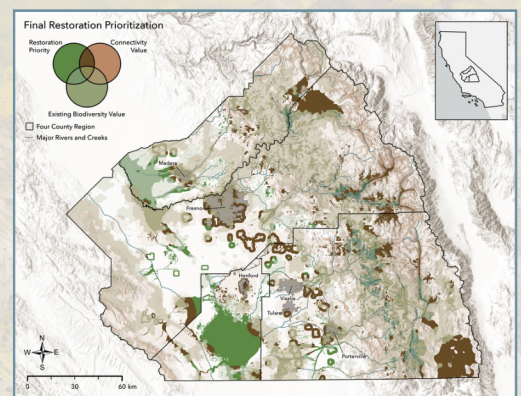
Prioritizing restoration to reduce water, air, and flood hazards can maximize benefits while providing equitable protection to the region's population. Poor water and air quality affect over 80% of the region's socioeconomically disadvantaged population, and can be mitigated through green buffers. Reducing high-severity wildfire in the Sierra yields cascading benefits extending across the region.

ECOLOGY



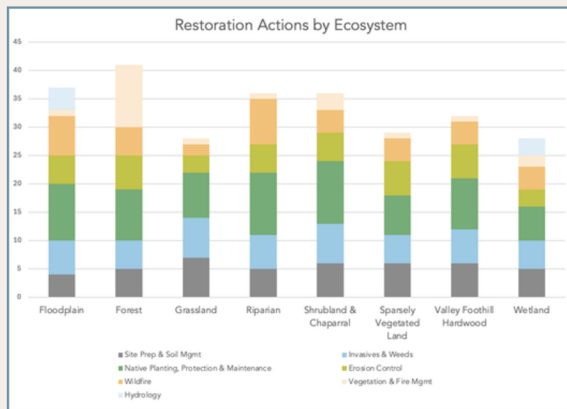
Priority restoration areas balance ecosystem resilience, connectivity, and degradation to identify where intervention can support future ecological success. Shrubland and chaparral ecosystems account for the largest share of prioritized areas (49%), followed by valley/foothill hardwood (22%), wetlands (12%), forests (8%), and riparian areas (6%).

RESTORATION



Identified areas are an aggregation of priorities for ecological and/or community benefit.

2.2 million
acres suggested for
restoration



IMPLICATIONS

The restoration plan provides a menu of restoration actions to encourage alignment across the study area's 8 ecosystems. When implemented in the identified priority areas, these efforts can reduce unsustainable groundwater use, support landscape-scale ecosystem restoration and build ecosystem resilience, provide alternative job opportunities for farmworkers, and address State-level goals such as California's Nature-Based Solutions Climate Targets, connecting work on the ground to state-level priorities.

RECOMMENDATIONS

- Meaningfully involve local communities in restoration work
- Provide financial incentives and technical assistance to private landowners
- Expand public-private partnerships and collaborative networks for a broader inclusion of land stewards
- Engage in local and regional planning to support habitat connectivity and ecosystem resilience for multi-benefit results

